

Performance Based Logistics Program Brief

Presented to Mr. David Oliver

4 June 2001

Outline

-  ***Definition***
-  ***Relationship to High Yield Logistics***
-  ***PBL Background***
-  ***Program Status***
-  ***Success Stories***
-  ***F/A-18 E/F***
-  ***Challenges***
-  ***Summary***

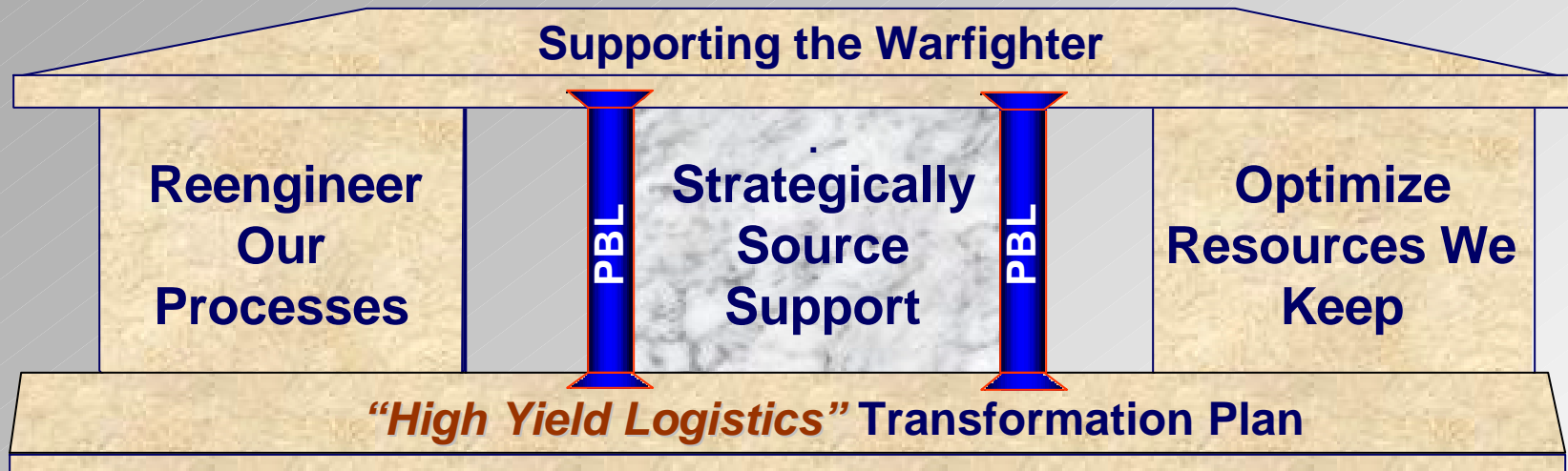
PBL Definition

“Alternative logistics support solutions that transfer traditional DoD inventory, supply chain and technical support functions to the supplier for a guaranteed level of performance at the same or reduced cost”

PBL Supplier Roles

- | | | |
|------------------------------|------------------------------------|---------------------------|
| ◆ Warehousing | ◆ Transportation | ◆ Configuration control |
| ◆ Requirements determination | ◆ Repair/overhaul/replace decision | ◆ Obsolescence management |
| ◆ Engineering/tech services | ◆ Consumable piece parts | ◆ Technology insertion |
| ◆ Guaranteed Availability | ◆ Guaranteed Reliability | ◆ Warranties |

Relationship to High Yield Logistics



PBLs support the Strategic Sourcing pillar:
“Seek best value sourcing for our inventory, infrastructure, maintenance and service functions.”

PBL Benefits

- ◆ *Reduced cycle time*
- ◆ *Reduced inventory*
- ◆ *Improved reliability/Obsolescence Mgmt*
- ◆ *Reduced total ownership cost*

PBL Background

PBLs May Vary in the Amount of Responsibilities Assumed by the Supplier



PBL Background

Development Process

Includes
Title 10 analysis
prior to award

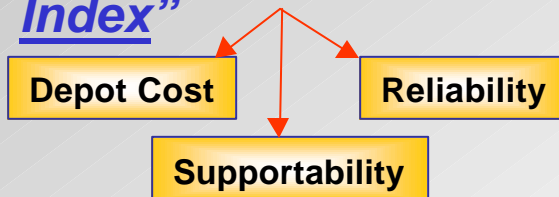
**Candidate
Selection**

**Business
Case
Analysis**

**Negotiate/
Award/
Track**

Input From:

- Program Office
- Fleet Logistics Personnel
- Engineering Activities
- Repair Depots
- Industry
- ICP “Opportunity Index”



Cost Areas:

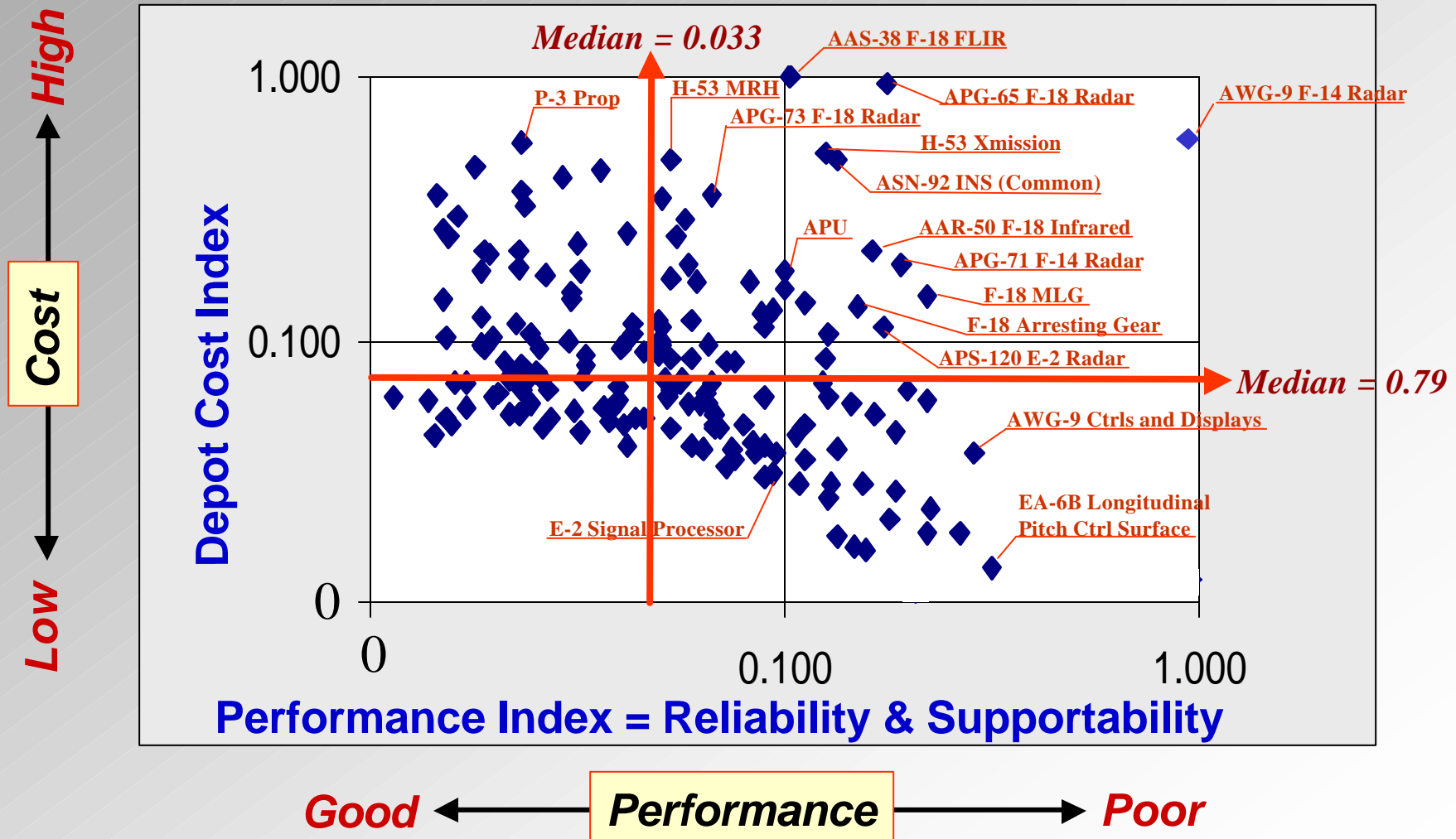
- Depot repair costs
- Procurement costs
- ICP ops cost
- Warehousing
- Transportation
- PBL Set-Up
- Fleet labor
- Fleet material costs
- Engineering & support

Focus On:

- Best Value Support
- Transition Plan
- Performance Reviews
- Incentives if Contractor Exceeds Baseline Performance

PBL Background...candidate selection

Cost-Performance Matrix - Top 200 Aviation Systems



Program Status...Contract Awards

Goal
30% of Obs
by
FY05

Awarded PBLs

	<u>End of FY00</u>	<u>As of Feb 01</u>	<u>Est Sep_01</u>
Mini-Stock Points/ COTS PBLs	49	61	111
Full/CLS PBLs	<u>18</u> 67	<u>31</u> 92	<u>77</u> 188

FY00 to FY01 → 180% Increase

Program Status...Contractor Performance

98% of “Mature” Contracts “On Track”

◆ **Semi-Annual Reviews Performed on “Mature” PBLs (51 of 92 currently ≥ 1 YR old)**

◆ **50 out of 51 On Track per Performance Requirements Contained in the Contracts**

◆ **One non-performer no fault of contractor...Navy changed maintenance after award...reqmts surged... PBL facilitating recovery...get well Sep 01**

Overall Performance Exceeding Expectations

Success Stories...Recent Awards

Aircraft Tires

- \$266M Obs Over 15 Years
- 23 Types...17 Platforms
- Inv Mgmt/Warehousing
- Guaranteed Availability 95% in 2 Days CONUS/4 Days OCONUS
- \$46M Savings Over 15 Years

F-14 LANTIRN

- \$55M Obs Over 8 Years
- Inv Mgmt/Warehousing
- Build/Repair/Buy
- Obsolescence Mgmt
- Contractor Manages Wholesale (Forward-Positioned) Ship Stock
- Guaranteed Availability 90% in 5 Days...IPG1s in 2 Days
- \$15.2M Savings Over 8 Years

ARC-210 Radio

- \$69M Obs Over 5 Years
- Inv Mgmt/Warehousing
- Build/Repair/Buy
- Class II Config Auth/Obsolescence Mgmt... MTBF Guarantees... Growth Incentivized
- EDI Asset Reporting
- Guaranteed Availability 85%/90% with Incentives...2 Days Pri 1-3...5 Days Pri 4-15
- \$5.4M Savings Over 5 Years

Success Stories...Recent Awards

•AEGIS

- \$88.8M Obs over 8 years
- Inv Mgmt/ Warehousing
- Build/Repair/Buy
- Class II Config Auth
- Guaranteed Availability 85%-90% w/ Positive and Negative Incentives
- Obsolescence Mgmt
- \$6.1M Savings over 4 years

•MK 41 VLS

- \$15.1M Obs over 5 years
- Inv Mgmt/ Warehousing
- Build/Repair/Buy
- Class II Config Auth
- Guaranteed Availability 88%-92%
- \$5.3M Savings over 5 years

• AN/BPS-15 Submarine Radar

- \$1.1M Obs for FY01
- Inv Mgmt/ warehousing
- Build/Repair/Buy...
- Monthly Reports/ Quarterly Progress Reviews
- Guaranteed Availability 90% in 2 days for IPG 1
- \$300K Savings over 5 years

F/A-18 E/F Integrated Readiness Support Teaming (FIRST)



Overview





Background ... The IPT

-  *NAVAIR Program Office, Industrial & Engineering Competencies*
-  *Naval Inventory Control Point*
-  *Boeing ... full service integrator*
-  *NADEP Business Offices /In Service Engineering Activity ... teaming with Boeing*
-  *DCMC/DCAA ... proposal audit support ... post award support*

Background ... What We're Buying



Supply Response Time ... based on established supply standards

-  ***Year 1 at 80%, Year 2 at 85%***
-  ***Carrier Stock effectiveness ... 90%***
-  ***Time on Backorder***
-  ***Material support ... Retail (planeside) computed by Navy ... Wholesale computed by Boeing***



Fleet Support

-  ***RFI/RFA - Both Years at 90% within 8 hours***
-  ***Respond to various requests for supply data / technical assistance***



Sustainability

-  ***Reliability improvements measured subjectively based on established criteria***



IS Connectivity

-  ***Completion of six development milestones.***

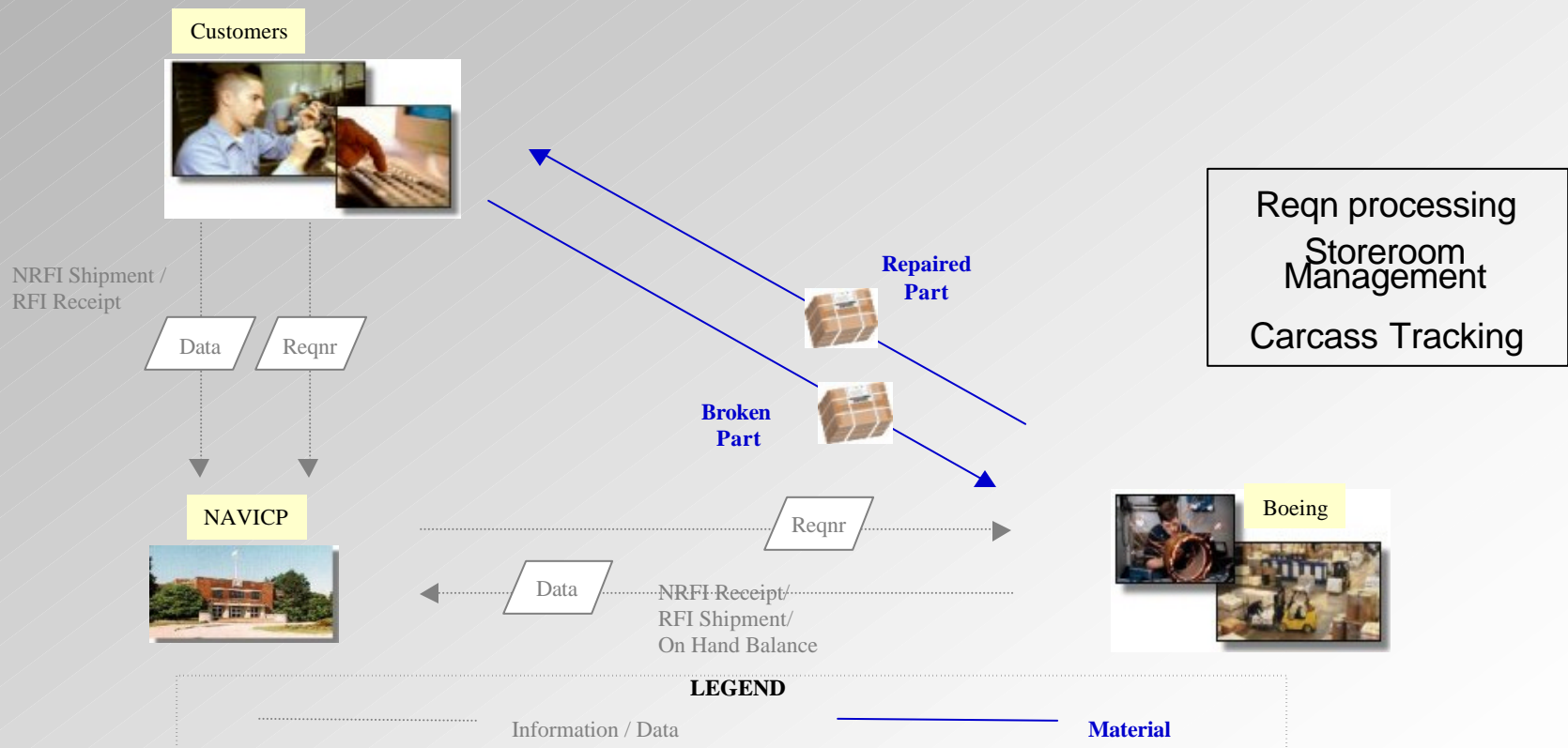
Background ... Scope

-  ***\$750 Million material and logistics over 5 years***
-  ***100 Different Systems***
-  ***125 Suppliers***
-  ***15,000 Items***
-  ***Three NADEP teaming agreements***
-  ***In Service Engineering Support***
 -  ***Reliability Based Logistics***
 -  ***Technical assists to fleet***
-  ***Information Systems***
 -  ***Integrated USN/Industry information systems***
 -  ***Total Asset Visibility***

NWCF Savings / Cost Avoidances estimated at \$52.4M over five year contract period.

Background ... Material Support

The process is transparent to the customer consistent with the tenets of the integrated supply system.



Financing...Funding Mix

 **APN-1 FUNDS: Program Management, Field Service Support, Engineering Support, Hornet Support at Lemoore, Database Connectivity and Related Travel.**





 **APN-6 FUNDS: Interim Supply Support For Items Which Have Not Reached Material Support Date (MSD): Spares and Repair Support.**

 **NAVY WORKING CAPITAL FUNDS: Supply Support for Post-MSD Items: Retail and Wholesale Spares and Repair Support, Inventory Reporting and Management.**

	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>
APN-1	\$13M	\$12.4M	\$12.7M	\$12.9M	\$13.2M
APN-6	\$18.1M	\$11.5M	\$10.2M	\$1.1M	\$1.4M
NWCF	\$57.2M	\$123.1M	\$129.7M	\$180.5M	\$173.9M




Contract Specifics

Cost Plus Incentive Fee / Award Fee Mechanics:


-  **Cost reimbursable type contract - first 2 years**
-  **Cost performance closely managed by several tools:**
 - *Earned Value Management System (EVMS)*
 - *Availability of funds clause*
 - *Early indicators of cost related problems*
-  **Fee**
 - *Can fluctuate within range to incentivize contractor performance*
 - *Share ratios - overruns/under-runs shared from potential fee*
-  **Two Fee Categories ... complicated but appropriate**
 - *Incentive fee measures cost performance - appx 1/3 of pool*
 - *Award fee measures technical performance - appx 2/3 of pool*
 - *Metrics include Supply Availability, sustainment, IT, connectivity and fleet support*

Contract Specifics

Transition to FPI

-  *Current Plan to convert to Fixed Price Incentive (FPI) by the third year ... must be definitized*
-  *FPI contract allows some cost growth like a cost reimbursable contract, but has a ceiling at which, once reached, becomes a fixed price*
-  *Bottom line... unlike a cost type contract, Boeing's COSTS are at risk under FPI...not just fee*

Minimizing Risk



Risks are ...
Financial
Readiness
KTR performance



First 2 yrs ... risk mitigated by cost arrangement



Budget planning accommodated by BCA and actual costs



NWCF risk minimized by BCA results and lower investment in initial years



Aircraft in production next 10 yrs ... can trade spares and installs



Contractor incentivized to make the right investment

***Cost Effective Support ... Integrated
Efficiency ... Managed Risk***

PBL Challenges...FY01 and Beyond

Title 10, Core Issues...case by case review...work in process

-  ***Standard Central Air Data Computer – Capability proven with USAF***
-  ***Stores Management System – Similar technology repaired within Navy***
-  ***ARC-210 Radio/LANTIRN – Impractical/high cost to reverse comm'l repair***
-  ***Auxiliary Power Units – Contractor program mgmt...NADEP “touch labor”***

Vendor risk aversion...we're ready to play, industry may not be

-  ***Flag level contractor visits***
-  ***Industry symposiums...supplier conferences***

Program automation...budget and contractor performance tracking tools

Resource contention...basic business vs. business process reengineering (PBLs)

Continue to Work “Out of the Box”

Summary

Performance Based Logistics

- ◆ ***Attacking Obsolescence***
- ◆ ***Driving Reliability***
- ◆ ***Adopting Commercial Best Practices***
- ◆ ***Buying Response Time***
- ◆ ***Reducing Life Cycle Costs***

“Best Value Supply Chain Management”

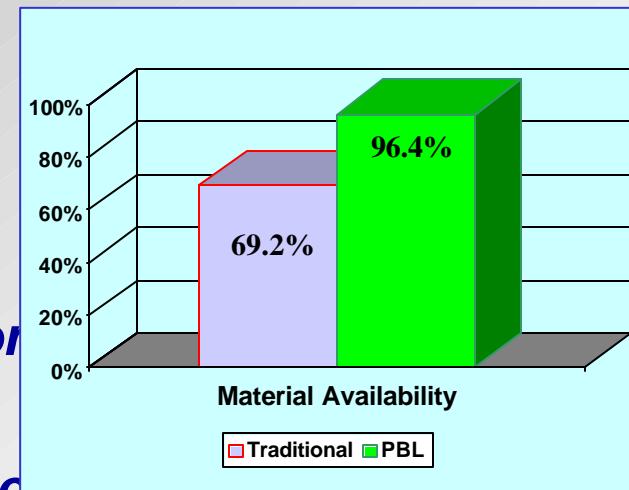


Back-Up

PBL Successes

Standard Central Air Data Computer - Legacy System -

- *Contract Highlights*
 - *Performance based incentives*
 - *Improved Availability (69% → 96%)*
 - *PBL program's first complete EDI solution*
 - *Technology insertion incentive*
 - *Obsolescence & configuration management*
 - *Commercial holding of wholesale inventory*
 - *Fleet reqn filled in 2 business days - CONUS*
- *10 years, \$26.5 Million*
- *Actual Savings through FY00: \$2.5M*



PBL Successes

Radar Warning Receiver ALR-67(v)3 - New System -

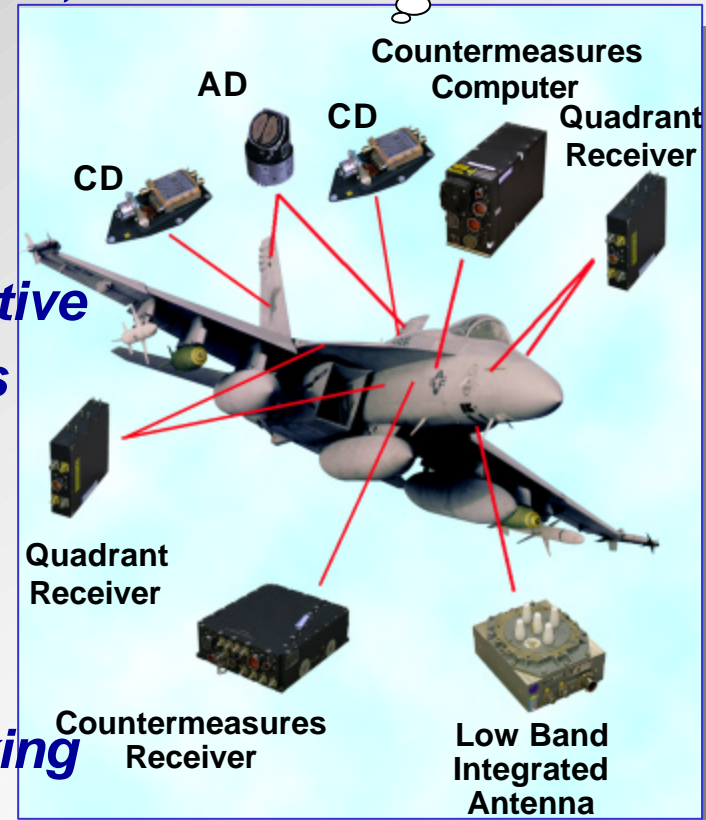
Base period not
to exceed
IOC +4 yrs

- Used on the F/A-18 E/F, awarded prior to IOC, NAVAIR funded E&S costs

- Contract Highlights

- Reliability improvements... 300 - 475 hrs MTBF by yr 6...technology insertion incentive
- Availability guarantee... 90% within 5 days
- Temporary loaner spares at no cost if reliability/availability metrics are not met
- Commercial wholesale inventory mgmt
- Obsolescence management
- EDI requisitioning & shipping status tracking

- 6 years, \$58.4 Million



PBL Successes

Auxiliary Power Unit *Partnership*

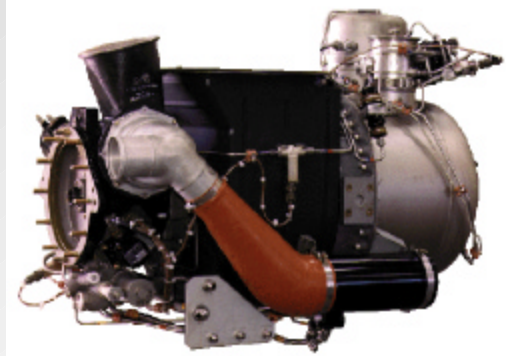
- Supports C-2, F/A-18, S-3 and P-3.
- **Public / Private Partnership**
 - Honeywell... Program Management
 - NADEP Cherry Point... Sub-contractor performing touch labor
- 10-Yr Performance Based, Firm Fixed Price (5 year base & 5 one-year options)
- 25% - 45% Reliability Improvement
- Delivery Guarantees... 2 Days (IPG 1)
- Obsolescence Management
- Surge Capability... 120% of Annual FH's
- Product Support Engineering

**Title 10
Compliant!**

NAVICP



Honeywell



PLUS:

**CAT[®]
Logistics**

On-Line
Shipping & Inv
Mgmt

Candidate Selection

PBL Opportunity Index

FA-18 System PBL Opportunity Index									
WUC	NOMENCLATURE	FLTHRS	TOTAL WUC COST	Reliability Factor	Support Ratio	DCI	RI	SI	OI
742G	APG65(V) () Radar Set	287318	\$20,605,538	0.009	0.253	0.930	1.000	0.301	0.846
74D9	AAS38 () Detecting Set	287063	\$22,154,970	0.016	0.155	1.000	0.563	0.185	0.812
74B2	APG73 Radar Set	278898	\$10,729,028	0.111	0.170	0.484	0.081	0.202	0.382
73X3	Bomb Nav Associated Equipment (Contd)	287221	\$9,118,696	0.046	0.029	0.412	0.196	0.035	0.323
13C1	Landing System	287318	\$3,231,151	0.018	0.642	0.146	0.500	0.764	0.292
74Q2	AAR50 Nav Infrared Receiving Set	278898	\$4,807,159	0.518	0.615	0.217	0.017	0.732	0.264
1431	Horizontal Stabilizer System	287318	\$7,737,919	0.101	0.018	0.349	0.089	0.021	0.261
1111	Forward Fuselage Section	287055	\$5,413,296	0.129	0.182	0.244	0.070	0.217	0.214
13A1	Gear System	287213	\$2,936,314	0.092	0.533	0.133	0.098	0.635	0.203
13C2	Landing Gear System	287318	\$2,297,655	0.022	0.316	0.104	0.409	0.376	0.190
1461	Trailing Edge Flap System	287318	\$5,096,756	0.124	0.091	0.230	0.073	0.108	0.188

• Index lists systems in priority order from 1.0 (best candidate) to 0.0

• Depot Costs along with Reliability and Supportability factors form the applicable indexes

• Depot Cost, Reliability and Supportability are weighted (70%, 15%, 15%) and summed to form the Opportunity Index

Deliverables:

1. Prioritized listing of systems
2. Stock Number listing containing cost, reliability and customer support data
3. Cost-Performance Matrix

FY01 Queue

**55 Deals on
the Plate**

Anticipated Maritime Awards

Mini Stock Point/Organic

- AN/BRD-7
- Mechanical Seals
- AN/BQQ-5(v)
- AN/BSY-1 Surface Sonar-Subs
- AN/WSN-7 Ring Laser Gyro
- AN/AQS-14 Sonar Detection Sys
- Dry Deck Shelter
- AN/TPX-42 Ship-Shore Sys
- Noise Tested Bearings
- Electrolytic Oxygen Gen
- CDL-N AN/USQ-123A
- Submarine Shaft Seals
- Shaft Seal Tech Assist
- AN/TMQ-44(V)
- AN/SYQ-XX(V) Tac Msg Sys
- MK XII IFF
- AN/BQH-7
- AN/BQS-15 Sonar Sys
- AN/UYQ-87
- Vertical Launch Sys Cables
- AN/BSQ-9
- Radar Absorbent Substrates
- Periscope Fairing/Hoist Cyl

Commercial Items

- MD-1045/BSC-1
- RONS
- WSC-8 v 1& 2
- 50 Person Life Raft
- Joint Maritime Cmd Info Sys
- Life Raft Inflation Valve
- Reverse Osmosis Desalinator
- Advanced Radiographic Sys
- Supplemental Weather Radar
- Smart Ship Circuit Cards
- AN/BPS-15J Radar
- AN/BPS 16 V 2/3 Radar
- PKP Fire Extinguisher
- LM2500 Valves
- Mars Engine
- LM2500 Breadman II
- Reusable Bulk Containers
- AN/USC-38 Hi-Freq Satellite Program

Full PBL / CLS

- 3 ton & 5 ton A/C units
- Chesterton Pumps 1st phase
- Automated Digital Acq Subsystem
- AEGIS SPY 1 Radar
- United Defense Gun Sys (MK45, 75, 32, 13, 26, 96, 36)
- ASDS (Advanced Seal Delivery System)
- TF40B Engine Parts
- OE-538 Multi-Function Mast Ant
- CV 3399
- CV 3325
- GPD-111 Tracking Receiver
- Central Atmospheric Monitoring Sys
- Integrated Control & Alarm System
- Stores Reefer Sys

FY01 Queue

Anticipated Aviation Awards

41 Deals on
the Plate

Mini Stock Point / Organic/COTS

- H-1 Attitude Indicator
- H-1 Generator
- H-1 Hellfire Control Panel
- Common PRC-149
- Common TCAS
- F-14 Dig Flight Control Sys
- H-53 10-Item
- P-3 3J Mod
- S-3 Electron Tubes

Full PBL / CLS

- | | | |
|--|---|--------------------------------|
| • F-18 Heads-Up Display/ Digital Display Indicator (P) | • F-14 APG-71 Radar | • H-60 Avionics |
| • F-18 Generator Contr Unit (P) | • F-14 Mission Computer | • H-60 17 Item |
| • F-18 Aux Power Unit (P) | • SE Radar Test Station | • H-60 Fwd Looking Infrared |
| • F-18 Stores Mgmt Upgrade | • SE IFF Test Set | • P-3 APS-137B Radar |
| • F-18 E/F Integrated Readiness Support Teaming | • SE H-1 Blade Test Set | • P-3 Landing Gear Piece Parts |
| • F-18 Cockpit Video Recorder | • S-3 Windshields | • H-3 Bit/Piece |
| • V-22 Digital Electronics Unit | • C-130 Aux Power Unit | • H-53 Sale of Parts;A/C |
| • V-22 Digital Map System | • Common ASN-50 | • UH-1N Fwd Looking Infrared |
| • V-22 Flat Panel | • Common ALE-50A | |
| • V-22 Swashplate (P) | • Common Tac Air Moving Map-Dig Map Sys | |
| • E-2C Grp II Mission Computer | • Common Tac Air Moving Map-Adv Memory Unit | |
| • F-14 Heads-Up Display | • Common APR-39A V2 (P) | |

(P) = Govt/Industry Partnership